

**CLAIMS**

What is claimed is:

1. A method for performing a rolling upgrade in a computing system in which multiple members execute a computer application based upon a first version of a shared file, comprising:

creating a second version of the shared file;

bringing down a first member, wherein a second member is not brought down while the first member is down;

creating a private symbolic link for the first member to reference the second version of the shared file, the private symbolic link only applying to members of a group associated with the private symbolic link, the group including less than all members in the computing system; and

bringing up the first member so that the first member references the second version of the shared file.

2. The method of claim 1 further comprising:

bringing down the second member, wherein the first member is not brought down while the second member is down;

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creating a second private symbolic link for the second member to reference the second version of the shared file; and

bringing up the second member.

3. The method of claim 2 in which the private symbolic link and the second symbolic link are the same, and wherein both the first and second members are members of the group associated with the private symbolic link.

4. The method of claim 2 further comprising removing the first version of the shared file.

5. The method of claim 2 in which the private symbolic link for the first member references a first private copy of the second version of the shared file and the second private symbolic link for the second member references a second private copy of the second version of the shared file.

6. The method of claim 2 in which the private symbolic link for the first member and the second private symbolic link for the second member references the same copy of the second version of the shared file.

7. The method of claim 1 further comprising:

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bringing down the second member, wherein the first member is not brought down while the second member is down;

creating a second private symbolic link for the second member to reference a third version of the shared file; and

bringing up the second member so that the second member references the third version of the shared file, wherein both the first member and the second member simultaneously operate different versions in the computing system.

8. The method of claim 1 in which one or more copies exist for each version of the computer application.

9. The method of claim 1 in which the private symbolic link comprises a property that identifies a link criteria.

10. The method of claim 9 in which the link criteria comprises a member identifier.

11. The method of claim 1 further comprising:

creating a direct object reference for the first member to the second version of the shared file.

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12. The method of claim 11 in which the direct object reference is automatically created by removing the private symbolic link.

13. The method of claim 1 further comprising:

creating a third version of the shared file.

bringing down the second member, wherein the first member is not brought down while the second member is down;

creating a second private symbolic link for the second member to reference the third version of the shared file; and

bringing up the second member.

14. The method of claim 1 in which the act of creating the second version of the shared file comprises:

copying the shared file; and

patching the shared file to create the second version.

15. The method of claim 1 in which the private symbolic link is private to a member.

16. The method of claim 1 in which the act of bringing down the first member comprises:

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shutting down a computer application at a node associated with the first member.

17. The method of claim 1 in which the first member still executes the first version of the computer application concurrently with the second member executing the new version of the computer application.

18. A method for redirecting a reference from an entity to one or more shared files, comprising:

creating a first version of a shared file;

creating a second version of a shared file;

creating a first private symbolic link to reference the first version of the shared file, the first private symbolic link only applying to members of a first group associated with the first private symbolic link, and

creating a second private symbolic link to reference the second version of the shared file, the second private symbolic link only applying to members of a second group associated with the second private symbolic link.

19. The method of claim 18 in which the first and second versions of the shared file are web pages.

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20. The method of claim 19 in which members of a first group are entities operating a first browser application and members of the second group are entities operating a second browser application.
21. The method of claim 18 in which the first symbolic link has a link criteria that defines the membership of the members of the first group associated with the first symbolic link.
22. The method of claim 21 in which the link criteria identifies a member to create a member private symbolic link.
23. The method of claim 21 in which the link criteria identifies an application version number.
24. The method of claim 21 in which the first group comprises multiple entities as members.
25. The method of claim 21 in which the first symbolic link provides a reference for a specific pathname.

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26. The method of claim 21 in which the first symbolic link provides a reference for a directory.

27. The method of claim 18 in which the first private symbolic references a first private copy of the first version of the shared file and the second private symbolic link references a second private copy of the second version of the shared file.

28. The method of claim 18 wherein both the members of the first group and members of the group simultaneously operate different versions of the one or more shared files.

29. The method of claim 18 in which one or more copies exist for each version of the one or more shared files.

30. The method of claim 18 further comprising:  
creating a direct object reference for the members of the first group to the first version of the shared file.

31. The method of claim 30 in which the direct object reference is automatically created by removing the first private symbolic link.

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32. A system for performing a rolling upgrade in a computing system in which multiple members execute a computer application based upon a first version of a shared file, comprising:

means for creating a second version of the shared file;

means for bringing down a first member, wherein a second member is not brought down while the first member is down;

means for creating a private symbolic link for the first member to reference the second version of the shared file, the private symbolic link only applying to members of a group associated with the private symbolic link, the group including less than all members in the computing system; and

means for bringing up the first member so that the first member references the second version of the shared file.

33. A computer program product comprising a computer usable medium having executable code to execute a process for performing a rolling upgrade in a computing system in which multiple members execute a computer application based upon a first version of a shared file, the process comprising:

creating a second version of the shared file;



bringing down a first member, wherein a second member is not brought down while the first member is down;

creating a private symbolic link for the first member to reference the second version of the shared file, the private symbolic link only applying to members of a group associated with the private symbolic link, the group including less than all members in the computing system; and

bringing up the first member so that the first member references the second version of the shared file.

34. A system for redirecting a reference from an entity to one or more shared files, comprising:

means for creating a first version of a shared file;

means for creating a second version of a shared file;

means for creating a first private symbolic link to reference the first version of the shared file, the first private symbolic link only applying to members of a first group associated with the first private symbolic link, and

means for creating a second private symbolic link to reference the second version of the shared file, the second private symbolic link only applying to members of a second group associated with the second private symbolic link.

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35. A computer program product comprising a computer usable medium having executable code to execute a process for redirecting a reference from an entity to one or more shared files, the process comprising:

creating a first version of a shared file;

creating a second version of a shared file;

creating a first private symbolic link to reference the first version of the shared file, the first private symbolic link only applying to members of a first group associated with the first private symbolic link, and

creating a second private symbolic link to reference the second version of the shared file, the second private symbolic link only applying to members of a second group associated with the second private symbolic link.